

NEW RANGE AND A NEW SUBSPECIES FOR
THE SNAKE *ERIDIPHAS SLEVINI*

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ABSTRACT.— Additional specimens of *Eridiphas slevini* from Baja California del Sur are reported and discussed and the first specimen from Baja California del Norte is reported. Specimens from San Marcos Island are distinguished from mainland stock with the description of the new subspecies *E. s. marcosensis*.

Of the few reported specimens of *Eridiphas slevini* (Tanner), most have been taken in the Cape region of Baja California, including Cerralvo Island. Tanner (1943) in his description of the species *Hypsiglena slevini*, stated that the holotype (CAS 53631) was collected at Puerto Escondido in Baja California by Joseph R. Slevin on 14 June 1921. A second specimen (CAS 86093) was collected in January 1959 by Dr. Alan E. Leviton and Mr. Hugh B. Leech from a rivulet in the El Saltito Arroyo, 12 miles east of La Paz (Leviton and Tanner 1960). Soulé (1961) reported the occurrence of the species on Cerralvo Island, the specimen (CAS 88985) having been collected on 6 March 1960 by Dr. Michael E. Soulé and Mr. Robert Crippen (Etheridge 1961).

Specimens remain scarce in collections, but recent field work has produced a series from a wide geographical area, including the San Ignacio-Santa Rosalia area of Baja California del Sur.

Specimens from this area are, first, an adult female (BYU 33672) taken alive on 26 August 1977 at 2300 hours, 17.1 miles (by Mexican Highway 1) NW Santa Rosalia. A second adult female (CAS 146498) was collected on 14 September 1977, 18 miles (by Mexican Highway 1) NE Santa Rosalia by Robert L. Seib. Two additional adult female specimens (CAS 146499 by R. L. Seib and BYU 34618) were collected 7.6 miles (by Mexican Highway 1) on 7 May 1978 and 7.0 miles (by Mexican Highway 1), 2130 hours on 7 June 1978, respectively, E San

Ignacio. A juvenile male (BYU 34651), was taken S Santa Rosalia, 2.2 miles W the village of Santa Agueda on 14 June 1978 at 2140 hours as it was foraging along a streambed at the base of an aqueduct.

A specimen of *E. slevini* was recently discovered near Bahia de los Angeles, Baja California del Norte. This specimen, a juvenile male (BYU 36415), was collected as it lay coiled in a small basal fissure of a boulder in a dry and narrow, rock-strewn wash, about 0.5 miles north of the paved road at a point 9.2 miles (by road) west of the resort at Bahia de los Angeles.

It is of interest to note that although a number of additional specimens have been collected from various locations in the Cape region since the last specimen was reported by Soulé (1961), none have reached the literature. Of three specimens on hand at the San Diego Society of Natural History Museum, two were collected north of Cabo San Lucas at Rancho La Burrera (SDSNH 45032) and La Burrera of La Laguna (SDSNH 45213) in August 1961 and September 1965, respectively, by Mr. Trinidad Castillo and Mr. A. Agundes. The third specimen (SDSNH 46051) was collected at Rancho Fragua in Arroyo Fragua, 15 miles northwest of Loreto on 2 October 1967 by Mr. Reid Moran. Before the range extension to San Ignacio, the locality for SDSNH 46051 had, in all probability, been the most northerly point known for the species. A juvenile female specimen (BYU 34652) collected between Loreto and Puerto Escon-

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dido at the fishing village known as Junca-lito on 20 June 1978 at 2145 hours may be from the same arroyo as the specimen collected by Slevin in 1921. Another specimen (CAS 134804) is an adult male collected S La Paz, 3 km S San Bartolo on 1 July 1972 by Ted Papenfuss.

The range of *E. slevini* is now known to include Danzante Island. That specimen (CAS 140097) is an adult female collected during July 1974 by Steven Strand.

Included with the material from the San Ignacio-Santa Rosalia area are two specimens from San Marcos Island. Both were collected in the large Arroyo de la Taneria adjacent to the gypsum mine on the island by one of us (JRO). These specimens constitute a new insular record and bear characters which distinguish them from the presently known mainland stock.

Eridiphas slevini marcosensis, subsp. nov.

HOLOTYPE.—BYU 34617, an adult female collected from a talus slope on the south side of Arroyo de la Taneria on San Marcos Island at 2130 hours on 18 June 1978.

PARATYPE.—BYU 34616 an adult female collected from a flat wash near the goat corrals in Arroyo de la Taneria at 2155 hours on 2 June 1978.

DIAGNOSIS.—A subspecies closely related to and apparently derived from the mainland *Eridiphas slevini*, from which it can be distinguished in having a greater number of ventral scales, dorsal blotches, and small head size.

DESCRIPTION OF HOLOTYPE.—An adult female, total length 467 mm, tail 83 mm, head 17.5 mm, snout length 4.5 mm, diameter of orbit 3.0 mm; ratio of tail length to total length 17.95 percent, head into body 4.56 percent.

Scale rows on body 21-23-19, on the tail at the 15th subcaudal 6 rows; ventrals 200, subcaudals 61, anal divided; supralabials 8-8, infralabials 10-10; preoculars 2-2, upper preocular 3 times longer than lower; postoculars 2-2 with parietals in contact with lower, temporals 1 + 2, loreals 1-1, nasal divided, rostral wider (3.1 mm) than high (1.3 mm); 14 maxillary teeth.

First pair of infralabials in broad contact

on the midventral line, surrounding the mental and wedging posteriorly between the anterior pair of genials; genial size moderate, posterior pair slightly more elongate than anterior pair, the first five infralabial pairs contacting anterior genials, the fifth and sixth pairs in contact with posterior genials; three gulars between posterior genials and first ventral.

Dorsal pattern consists of five longitudinal rows (six rows at midbody) of dark gray-brown spots on a brown-gray ground color, dorsal rows on body of 65 spots, 28 on tail, some of which are divided or partially divided at the dorsal midline, each spot involving 13 to 20 scales, center of spots lighter than margins; lateral spots smaller, involving 1-5 scales all dark gray-brown; scales involved in ground color have light colored edges, scales between middorsal spots being lightest.

Nape pattern composed of five spots; a median spot 4 scales long and about 2.5 scales wide, separated from parietals by a single scale, two round spots at each side of median spot involve 12 to 13 scales each, two posterior nape spots are elongate and in line with spots on dorsal midline, separated from one another by a single row of light-edged scales and from anterior nape spots by 1-1.5 scales. Elongate lateral spots begin on the last supralabial and last two infralabials, pass under anterior nape spots upward to and separated from the posterior nape spots (by less than one scale); a postocular stripe extends from orbit through lower postocular to reach mouth on the 6th and 7th supralabials; supralabials are cream colored with small dark gray-brown spots on anterior-posterior edges, infralabials are similar with less dark color; parietals, frontal, and supraoculars have fine irregular dark gray-brown blotches; gulars, lateral edges of ventrals and subcaudals finely flecked, chin shields, central of ventrals and subcaudals are immaculate yellow-gray.

VARIATION.—Single paratype similar to holotype in nearly all details. Color pattern slightly faded yet discernable. Ventral count lower, with 198, but higher than ventral counts for mainland specimens. Tail incomplete, with only 23 subcaudals. Temporals 2 + 2 due to a small scale between

each large primary temporal and 6th supralabials. Head to body ratio 4.69 percent (4.56 percent in holotype). This ratio indicates a smaller head size in *E. s. marcosensis* (Table 1).

SIZE.—*Eridiphas slevini* is small to moderate in size; the largest specimen measured from the peninsula is 562 mm in total length, 102 mm for the tail and a snout-vent length of 460 mm (SDSNH 45213). The smallest specimen is 213 mm in total length, 40 mm for tail (CAS 53631). The paratype for *E. s. marcosensis* (BYU 34616) is the largest specimen measured, having a snout-vent length of 481 mm and with a total length of 524 mm; however, more than half of the tail is missing, with only 43 mm remaining.

REMARKS.—The data presented in Table 1 indicate a trend for a higher number of ventral and subcaudal scutes toward the north. The exceptions are BYU 34651 from Santa Agueda, with a low count of 182 ventrals, and SDSNH 46051 from near Loreto, with a high count for the Cape Region of 192 ventrals. The most variable characters appear to be counts for ventrals, subcaudals, and dorsal blotches, and head to body ratios. Temporal formulas appear to be of little value because a random variation is seen throughout the range. There is no overlap between *E. s. marcosensis* and mainland stock involving ventral counts, the number of dorsal blotches, and head size.

However, subcaudals are well within the given range and head to body ratios for *E. s. marcosensis* and the Cerralvo Island specimen are similar.

Several specimens bear peculiarities demonstrating a certain amount of genetic plasticity. The Danzante Island specimen is more darkly colored than other specimens seen and its pattern is indistinct, a character also observed in the paratype of *E. s. marcosensis*. One specimen from near San Ignacio (CAS 146499) does not bear the parietal-lower postocular contact characteristic of the genus. The separation is caused by what appears to be the formation of an extra scale of minute proportion from the lower fold of each parietal. Also the anal plate is divided twice to form three parts. The specimen from near San Bartolo (CAS 134804) has heavy nuchal blotches similar to *Hypsigena* and a low count for dorsal scales of 21 rows. The specimens from La Burrera (SDSNH 45032 and SDSNH 45213) also bear lower dorsal scale counts, with 22 and 21 rows respectively.

DISCUSSION

The new material from the San Ignacio-Santa Rosalia area extends the range of *Eridiphas slevini* approximately 130 miles northward from the area at Puerto Escondido given by Leviton and Tanner (1960). The Bahia de los Angeles specimen repre-

TABLE 1. Variations in scale counts, body blotches, body proportions, and ratios of *Eridiphas slevini*¹.

	Cape region ²	Cerralvo Island ¹	Danzante Island	San Ignacio-Santa Rosalia	Bahia de los Angeles	San Marcos Island
Ventrals	187.8(184-192)6	186	195	190.8(182-194)5	193	199(198-200)2
Subcaudals	61.3(55-67)6	58	62	64.5(61-68)4	65	61
Dorsal scale rows	22.2(21-23)6	23	23	23(23)5	23	23(23)2
Supralabials	8(8)12	8-8	8-8	8(8)10	8-8	8(8)4
Infralabials	10(10)12	10-10	10-10	10(10)10	10-10	10(10)4
Loreals	1(1)12	1-1	1-1	1(1)10	1-1	1(1)4
Preoculars	2(2)12	2-2	2-2	2(2)10	2-2	2(2)4
Postoculars	2(2)12	2-2	2-2	2(2)10	2-2	2(2)4
Temporals	1.1 + 2.6(1-2 + 2-3)12	1 + 2	1 + 3	1 + 2.4(1 + 2-3)10	1 + 2	1.5 + 2(1-2 + 2)4
Dorsal blotches	56.6(51-61)6	63	58	58.8(55-63)5	61	65(65)2
Tail length/ total length	17.81%(16.5%-19.2%)6	16.1%	18.55%	18.35%(17.45%-18.15%)4	17.9%	17.76%
Head length/ total length	5.08%(4.78%-5.56%)5	4.66%	4.84%	5.7%(4.95%-5.22%)4	—	4.63%(4.56%-4.69%)2

¹Juvenile specimens are not used in head to body ratios.

²Includes data from Leviton and Tanner (1960); does not include BYU 34652 from Loreto.

³From Soulé (1961).

sents an additional northerly extension of nearly 100 miles. Northerly progression probably occurred along the eastern third of the peninsula, avoiding the more barren Viscaino Desert to the west.

The possibility must be noted that we may be dealing with an isolated population in the Bahia de los Angeles region even though BYU 34615 is not significantly distinct. *Eridiphas* seems to prefer a more temperate climate as do *Lichanura*, *Elaphe*, and *Tantilla*. *Lichanura* is not presently known to have a zone of intergradation, the populations of the Central Desert and San Ignacio being separated by approximately 100 miles (Gorman 1965, Bostic 1971). *Elaphe rosaliae* occupies a range nearly identical to *Eridiphas* in Baja California del Sur (Savage 1960). Specimens of *Elaphe rosaliae* in Baja California del Norte discovered by Hunsaker (1967) in Guadalupe Canyon are indicative of a disjunct northern population of that species and presents a clue as to the

possible occurrence of *Eridiphas* in more northerly areas than those localities presently known. It is interesting to note as well, the discovery of the recently described gecko *Anarbylus* (Murphy 1974) in southern California (Fritts, pers. comm.), another indication that many of the southern forms may range well into the north.

The four specimens collected between San Ignacio and Santa Rosalia were taken from only two sites along Mexican Highway 1. Populations also occur near Bahia de los Angeles, Loreto, and La Paz. Although present data are meager, such evidence suggests a spotty distribution for *E. slevini*, a condition possibly created by competition pressures imposed by the more recent arrival of other genera. This idea adds strength to the hypothesis that *E. slevini* represents a relict form and probable progenitor of the modern genera *Hypsiglena* and *Leptodeira* (Leviton and Tanner 1960).

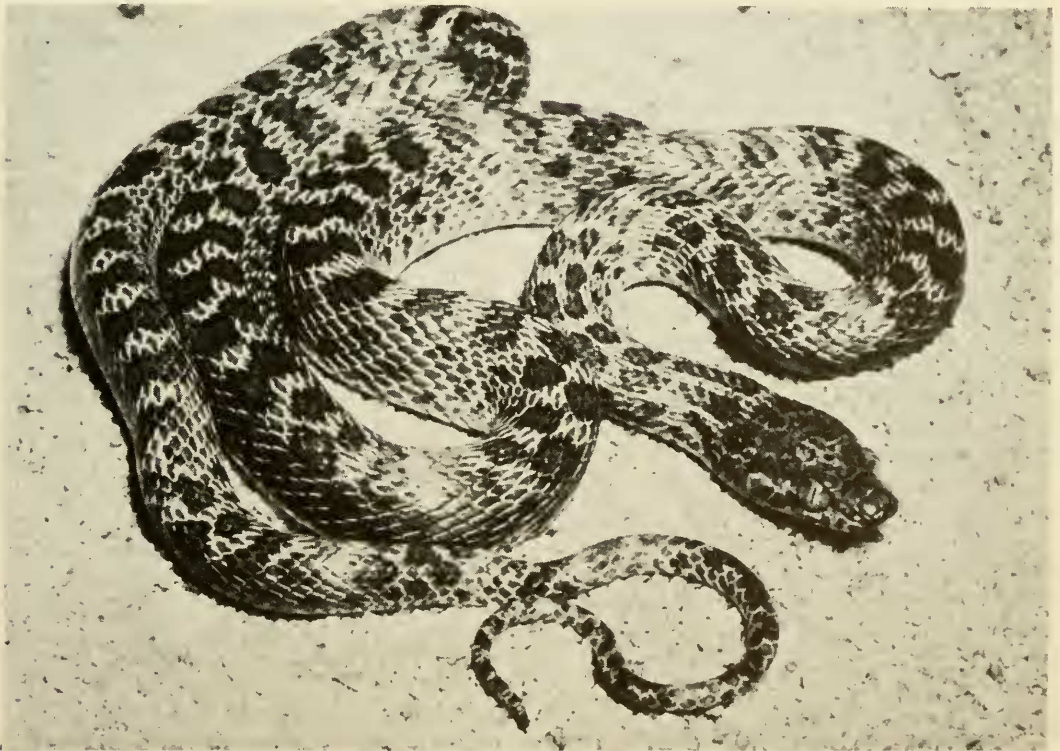


Fig. 1. Dorsolateral view of *Eridiphas slevini marcosensis* holotype, BYU 34617 (photo courtesy of John H. Tashjian).

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Fig. 2. Distribution of *Eridiphas slevini* on the Baja California peninsula and neighboring islands.